

1. A communication system for providing communication services to a plurality of communication devices, the communication system comprising:

- a transmitting antenna;
 - a transmitter connected to the transmitting antenna and configured to
 - 5 transmit first wireless signals via the transmitting antenna;
 - a first receiving antenna wherein a first coverage area of the first receiving antenna is less than forty five degrees;
 - a first receiver connected to the first receiving antenna and configured to receive second wireless signals via the first receiving antenna;
 - 10 a second receiving antenna wherein a second coverage area of the second receiving antenna is less than forty five degrees and the second coverage area of the second receiving antenna is within the first coverage area;
 - a second receiver connected to the second receiving antenna and configured to receive third wireless signals via the second receiving antenna; and
 - 15 a communication interface connected to the transmitter, the first receiver, the second receiver, and a communication network and configured to provide the communication services between the communication network and the user communication devices.
- 20 2. The communication system of claim 1 wherein the first wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range.
3. The communication system of claim 1 wherein the first wireless signals are in the Multipoint Distribution Service (MDS) frequency range.
- 25 4. The communication system of claim 1 wherein the second wireless signals and the third wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range.

5. The communication system of claim 1 wherein the second wireless signals and the third wireless signals are in the Multipoint Distribution Service (MDS) frequency range.

5 6. The communication system of claim 1 wherein the user communication devices comprise wireless broadband routers.

7. The communication system of claim 1 wherein the transmitting antenna comprises an omni-directional antenna.

10

8. The communication system of claim 1 wherein the first coverage area of the first receiving antenna is thirty six degrees.

15

9. The communication system of claim 1 wherein the first coverage area of the first receiving antenna is twenty four degrees.

10. The communication system of claim 1 wherein the second coverage area of the second receiving antenna is twenty four degrees.

20

11. The communication system of claim 1 wherein the second coverage area of the second receiving antenna is twelve degrees.

12. The communication system of claim 1 wherein the communication interface comprises a downstream manager.

25

13. The communication system of claim 1 wherein the communication interface comprises an upstream manager.

14. A method for providing communication services to a plurality of communication devices, the method comprising:

in a transmitter, transmitting first wireless signals via a transmitting antenna;

5 in a first receiver, receiving second wireless signals via a first receiving antenna wherein a first coverage area of the first receiving antenna is less than forty five degrees;

in a second receiver, receiving third wireless signals via a second receiving antenna wherein a second coverage area of the second receiving

10 antenna is less than forty five degrees and the second coverage area of the second receiving antenna is within the first coverage area; and

in a communication interface connected to the transmitter, the first receiver, the second receiver, and a communication network, providing the communication services between the communication network and the user

15 communication devices.

15. The method of claim 14 wherein the first wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range.

20 16. The method of claim 14 wherein the first wireless signals are in the Multipoint Distribution Service (MDS) frequency range.

17. The method of claim 14 wherein the second wireless signals and the third wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range.

25 18. The method of claim 14 wherein the second wireless signals and the third wireless signals are in the Multipoint Distribution Service (MDS) frequency range.

30 19. The method of claim 14 wherein the user communication devices comprise wireless broadband routers.

20. The method of claim 14 wherein the transmitting antenna comprises an omni-directional antenna.

5 21. The method of claim 14 wherein the first coverage area of the first receiving antenna is thirty six degrees.

22. The method of claim 14 wherein the first coverage area of the first receiving antenna is twenty four degrees.

10

23. The method of claim 14 wherein the second coverage area of the second receiving antenna is twenty four degrees.

15

24. The method of claim 14 wherein the second coverage area of the second receiving antenna is twelve degrees.

25. The method of claim 14 wherein the communication interface comprises a downstream manager.

20

26. The method of claim 14 wherein the communication interface comprises an upstream manager.